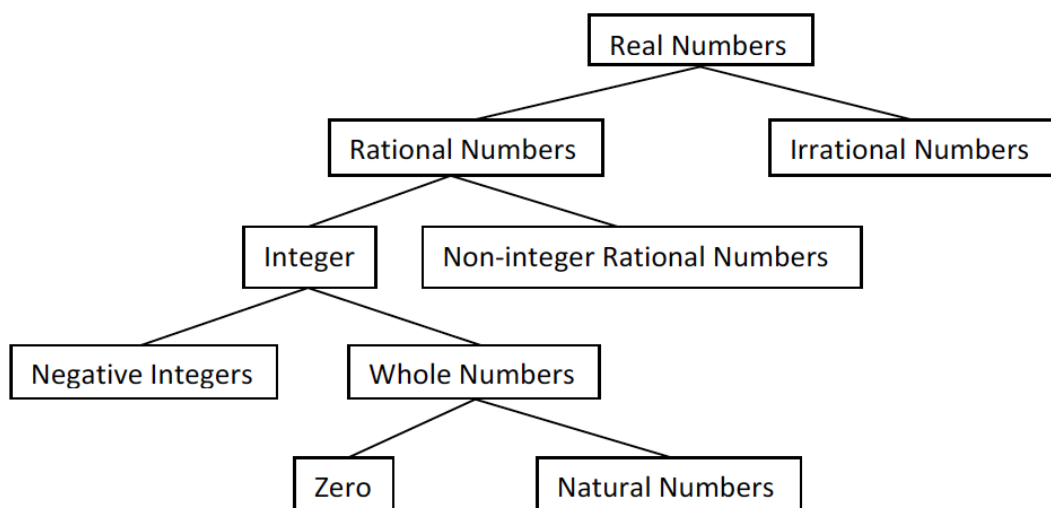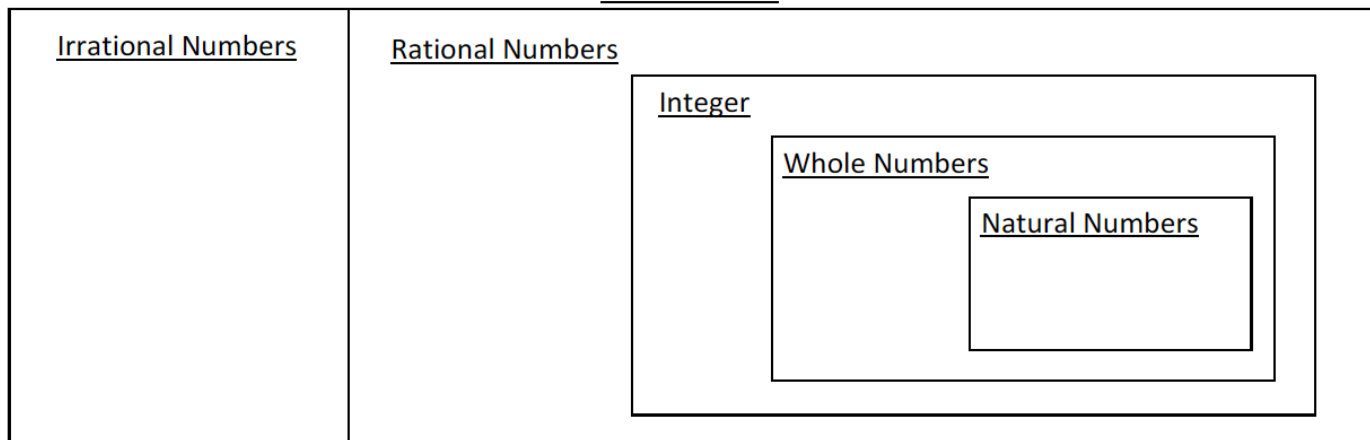Name _____ Date _____ Period _____

Real Numbers

Real Number: any number that can be represented on a number line.

```
                          Real Numbers
                         /            \
              Rational Numbers      Irrational Numbers
                /           \
          Integer      Non-integer Rational Numbers
           /      \
Negative Integers   Whole Numbers
                      /        \
                   Zero      Natural Numbers
```

Real Numbers

Irrational Numbers	Rational Numbers
	Integer
	Whole Numbers
	Natural Numbers

Rational Numbers: The Quotient of any two integers (Any number that _can_ be written as a fraction)
Irrational Numbers: Any number which is not a rational number (Non-ending, non-repeating decimals)
Integers: $\{\ldots -3, -2, -1, 0, 1, 2, 3, \ldots\}$
Whole Numbers: $\{0, 1, 2, 3, 4, \ldots\}$
Natural Numbers: $\{1, 2, 3, 4, \ldots\}$ (Counting Numbers)

Example: Given the set of numbers $\left\{-6, -0.5, 4\frac{1}{2}, -96, \sqrt{3}, 0, 9, -\frac{4}{7}, -2.9, \sqrt{7}, -\sqrt{5}\right\}$

- Natural Numbers: 9
- Whole Numbers: 0, 9
- Integers: -6, -96, 0, 9
- Rational Numbers: $-6, -0.5, 4\frac{1}{2}, -96, 0, 9, -\frac{4}{7}, -2.9$
- Irrational Numbers: $\sqrt{3}, \sqrt{7}, -\sqrt{5}$
- Real Numbers: **_All_** numbers in the set.

Name _____ Date _____ Period _____

Real Numbers

Put a check mark to show which categories apply to each number.

Number	Natural	Whole	Integer	Rational	Irrational	Real
-7			√	√		√
-3.5						
$2\frac{5}{7}$						
108						
$\sqrt{5}$						
6π						
0						
$-\frac{3}{4}$						
$23.\overline{61}$						
$-\sqrt{3}$						
56.24						
-209						
$12\frac{2}{5}$						
-18π						
$\sqrt{36}$						
$-2.03\overline{4}$						